

NEWS RELEASE

LUCA PROVIDES UPDATE ON CAMPO MORADO PERFORMANCE AND COMMENCEMENT OF STAGE 3 OF IMPROVEMENT PROJECT

Vancouver, British Columbia, October 10, 2024 - Luca Mining Corp. (“Luca” or the “Company”) (TSX-V: [LUCA](#); OTCQX: [LUCMF](#); Frankfurt: [Z68](#)) is pleased to announce the successful implementation of the first two stages of the Campo Morado Improvement Project (CMIP) and commencement of Stage 3.

In Q4 2023 the Company partnered with Ausenco México S. de R.L. de C.V. (“Ausenco”) to implement a staged improvement project designed to increase metallurgical performance, mill throughput, sustaining plant performance and operating cash flow. The initial phase of the project (Stage 1) included a comprehensive geometallurgical program focused on sampling, training and procedures as well as optimizing the process controls in the plant. The primary goal of Stage 2 was sustainable operations and improving plant reliability. Stage 3 will now build on the improvements to date and implement a new flow sheet with modest modifications to the plant with the goal of producing three high-quality, saleable concentrates of copper, lead and zinc.

The CMIP has already delivered significant financial benefits to the Campo Morado operation with only minor changes to the process plant. These benefits have mostly come from higher copper recovery which has improved by 53% over the same period in 2023. Copper recovery to the bulk concentrate year-to-date (YTD)¹ is 68.5% compared to 44.7% during the same period in 2023. Figure 1 below shows bulk concentrate copper grade and Figure 2 shows copper recovery over the last 21 months. This has resulted in an estimated 10% increase of revenue per milled tonne² over the same period year-on-year assuming constant metals prices.

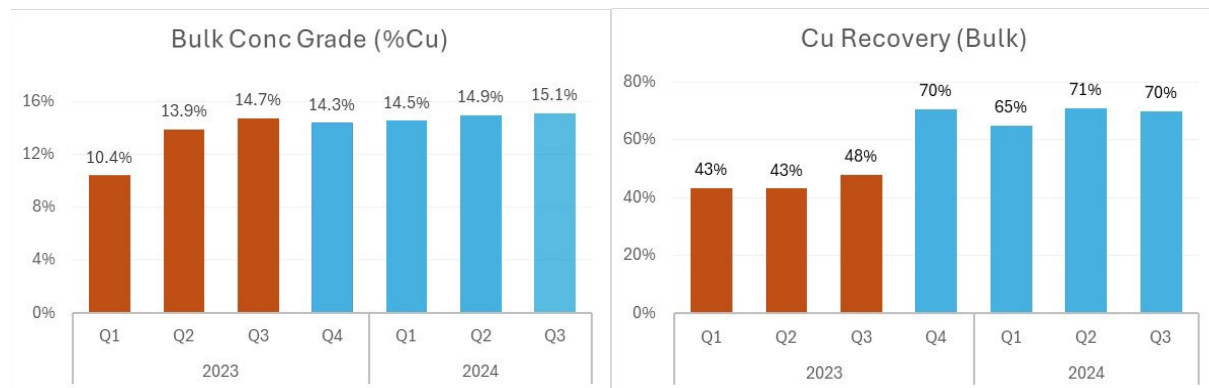


Figure 1 - Campo Morado Bulk Concentrate Grade

Figure 2 - Campo Morado Copper Recovery to Bulk Concentrate

Work has begun on Stage 3 of the CMIP project which consists of modest but important modifications to the processing plant, including:

- Revised metallurgical sampling systems.
- Modernization of reagent dosing systems.
- New flotation cell air flow monitoring and control.
- Installation of next generation pH/ORP probes.
- New bulk rougher concentrate surge tank.
- Modifications to the bulk regrind circuit to operate with 2-stage regrinding.

Completion of Stage 3 will increase the degree of liberation of the copper and lead minerals, allowing for collection in two separate concentrates through a sequential flotation process. In conjunction with the refurbishment of equipment and a new mine-to-mill strategy, it is anticipated that the CMIP will deliver more robust revenues for the Campo Morado operation. The Company expects to test the copper-lead separation process by the end of the year, with full project completion by Q2 2025.

The Company, together with Ausenco, has demonstrated that the Campo Morado mine and mill are capable of sustained profitable operations and future work will continue to enhance the value of the asset.

CEO Dan Barnholden commented, *“The improvements at Campo Morado have been an outstanding success to date and moving to Stage 3 of this program demonstrates Luca’s commitment to ongoing improvement at our assets. We intend to produce three clean, fully saleable and higher value concentrates of copper, zinc, and lead, which will have an immediate, positive impact on revenues and, ultimately, cash flow.”*

1. YTD includes preliminary production data up to and including September 2024.
2. It is noted that this calculation is approximate given that total revenue received in any given period is based on several factors including but not limited to head grade, recovery and prices of multiple, marketable metals over time.

About Ausenco

Ausenco is a global company redefining what is possible. The team is based across 26 offices in 15 countries, delivering services worldwide. Combining deep technical expertise with a 30-year track record, Ausenco delivers innovative, value-add consulting studies, project deliver, asset operations and maintenance solutions to the minerals and metals and industrial sectors (www.ausenco.com)

About Luca Mining Corp.

Luca Mining (TSX-V: LUCA, OTCQX: LUCMF, Frankfurt: Z68) is a diversified Canadian mining company with two 100%-owned producing mines within the prolific Sierra Madre mineralized belt in Mexico which hosts numerous producing and historic mines along its trend. The Company produces gold, copper, zinc, silver and lead from these mines that each have considerable development and resource upside.

The Campo Morado mine, is an underground operation located in Guerrero State. It produces copper-zinc-lead concentrates with precious metals credits. It is currently undergoing an optimization program which is already generating significant improvements in recoveries and grades, efficiencies, and cashflows.

The Tahuehueto Gold, Silver Mine is a new underground operation in Durango State. which hosts numerous producing and historic mines along its trend. The Company is commissioning its mill and is expected to achieve commercial production by the end of the year.

On Behalf of the Board of Directors

(signed) “Dan Barnholden”

Dan Barnholden, Chief Executive Officer

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Qualified Persons

The technical information contained in this News Release has been reviewed and approved by Mr. Chris Richings, Vice-President Technical at Luca Mining as the Qualified Person for the Company as defined in National Instrument 43-101.

Cautionary Note Regarding Forward-Looking Statements

It should be noted that Luca declared commercial production at Campo Morado prior to completing a feasibility study of mineral reserves demonstrating economic and technical viability. Accordingly, readers should be cautioned that Luca's production decision has been made without a comprehensive feasibility study of established reserves such that there is greater risk and uncertainty as to future economic results from the Campo Morado mine and a higher technical risk of failure than would be the case if a feasibility study were completed and relied upon to make a production decision. Luca has completed a preliminary economic assessment ("PEA") mining study on the Campo Morado mine that provides a conceptual life of mine plan and a preliminary economic analysis based on the previously identified mineral resources (see news releases dated November 8, 2017, and April 4, 2018).

Statements contained in this news release that are not historical facts are "forward-looking information" or "forward-looking statements" (collectively, "Forward-Looking Information") within the meaning of applicable Canadian securities laws. Forward Looking Information includes, but is not limited to, disclosure regarding the anticipated revenue increases as a result of CMIP; other possible events, conditions or financial performance that are based on assumptions about future economic conditions and courses of action; the timing and costs of future activities on the Company's properties, including Stage 3 of CMIP. In certain cases, Forward-Looking Information can be identified using words and phrases such as "plans," "expects," "scheduled," "estimates," "forecasts," "intends," "anticipates" or variations of such words and phrases. In preparing the Forward-Looking Information in this news release, the Company has applied several material assumptions, including, but not limited to, that copper recoveries will be as assumed; that metals prices will remain constant; that the current exploration, development, environmental and other objectives concerning the Campo Morado Mine can be achieved; the program to improve mining operations at Campo Morado will proceed as planned; the continuity of the price of gold and other metals, economic and political conditions, and operations. Forward-Looking Information involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance, or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the Forward-Looking Information. There can be no assurance that Forward-Looking Information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on Forward-Looking Information. Except as required by law, the Company does not assume any obligation to release publicly any revisions to Forward-Looking Information contained in this news release to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

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